

REMARKS

The amendments to the claims are made to clarify that the asynchronous minicells are in fact ATM Adaptation Layer (AAL) minicells, such as AAL2 minicells. Basis for this is to be found in the specification in general and in figures 3 and 4 in particular. The Examiner will note that the detailed specification of the invention, which is stated as being given by way of example only, describes an AAL2 embodiment of the invention. However, one skilled in the art would readily appreciate that other embodiments could use other AALs, such as AAL5.

Response to Examiner's continued rejections

The Examiner has admitted that Achilleoudis (US 6,052,386) fails to teach a point-to-point subscriber line as claimed.

Furthermore, having studied the reference further, applicant has realized that there is no teaching in Achilleoudis of the use of AAL minicells. The passage cited by the Examiner (col 4, lines 30 to 39) discloses two different classes of data – system data and payload data. In the system data, minicells are disclosed for synchronization, ranging, housekeeping and MAC-protocol. The Examiner will observe that there is no disclosure that the minicells used for system data are ATM cells at all, and certainly no description that they are AAL minicells. Rather, the Examiner will see that it is the second class of data – i.e. payload data – that is described as based on ATM. Specifically, it is the “minicells for all other sorts of services ... [which] will all be based on Asynchronous Transfer Mode (ATM)” – see lines 37 to 39. It is clear that the payload class of data cannot form an engineering operations channel. Furthermore, while it is denied, for the reasons set out in previous responses, that the housekeeping, ranging and MAC-layer minicells constitute an engineering operations channel (EOC) as claimed, it is submitted that there is no disclosure in Achilleoudis that this data is formed from a sequence of AAL minicells.

The Examiner's previous response was particularly noteworthy for the introduction of a fourth reference for combination – namely Saussy (US 5, 936,963). While it is admitted that Saussy teaches that ATM data may be transferred over an ADSL link, the relevance of Saussy beyond that is unclear to the applicants.

The Examiner argues in paragraph 2 of the Office Action dated December 8, 2003, that "one of ordinary skill in the art would have been motivated to use the minicells [of Achilleoudis] in the ADSL network [of Saussy] since ADSL may operate over existing telecommunications infrastructure without substantial investment, and is transparent to voice services". With respect, this does not make sense. The existing telecommunications infrastructure referred to is the twisted pair copper lines forming the local loop from local telephone exchanges to subscriber telephones and indeed it is an advantage to re-use this existing infrastructure for data services such as ADSL. All of this, however, does not provide any shred of motivation to use the minicells of Achilleoudis in the ADSL network of Saussy. There is no logical connection between the Examiner's premise and conclusion.

The Examiner should also note that Saussy describes a point to point ADSL link, whereas Achilleoudis describes a point to multipoint hybrid fiber coax network (tree-and -branch network) (see fig 1, col 2, lines 47 to 49 and col 3, lines 61 to 67). There is absolutely no suggestion in the Saussy reference that there would be any reason to use the minicells as taught in Achilleoudis. Conversely, there is no suggestion in Achilleoudis that it should be applied over a digital subscriber line network such as Saussy. The fact that the Saussy and Achilleoudis references describe completely different network architectures strongly suggests that one skilled in the art would not combine teachings from these two diverse references.

However, applicant firmly submits that even if one skilled in the art were to combine these two references (and indeed the Czerwiec (US 6,314,102) and Lamport (US

5,138,615) references as the Examiner does) he would not arrive at the present invention as claimed for the following reasons:-

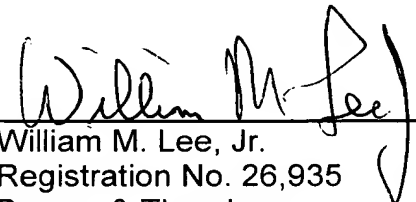
Applicant has already argued in detail why the combination of references does not disclose an "engineering operations channel" as required in the claims. This argument remains just as relevant with the introduction of the Saussy reference to the combination. Furthermore, in view of the current amendments to the claims, it is submitted that there is no teaching whatsoever in the combined references of the use of AAL minicells to form the engineering operations channel. While the Achilleoudis reference uses the word "mini-cells" it is far from clear that these are ATM cells at all and it is quite clear that there is no disclosure that these are AAL minicells as now required by all claims.

In view of the above, applicant respectfully, but firmly, submits that the invention as defined by the currently amended claims is patentably distinct from the prior art references cited by the Examiner and therefore requests favorable reconsideration of the application.

An appropriate petition for extension of time is also submitted herewith.

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Respectfully submitted,



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